

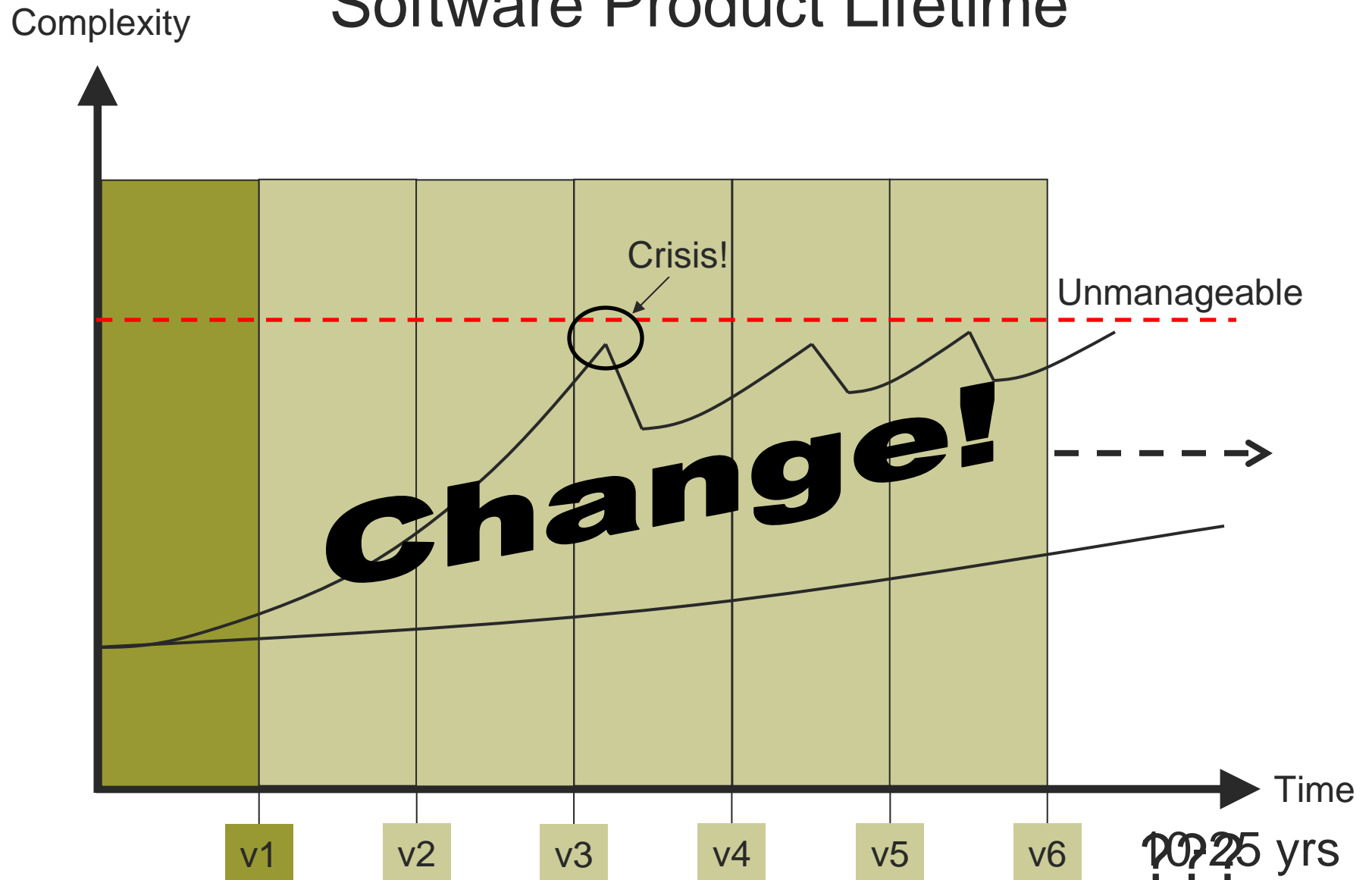


Agile Software Development In 20 Minutes

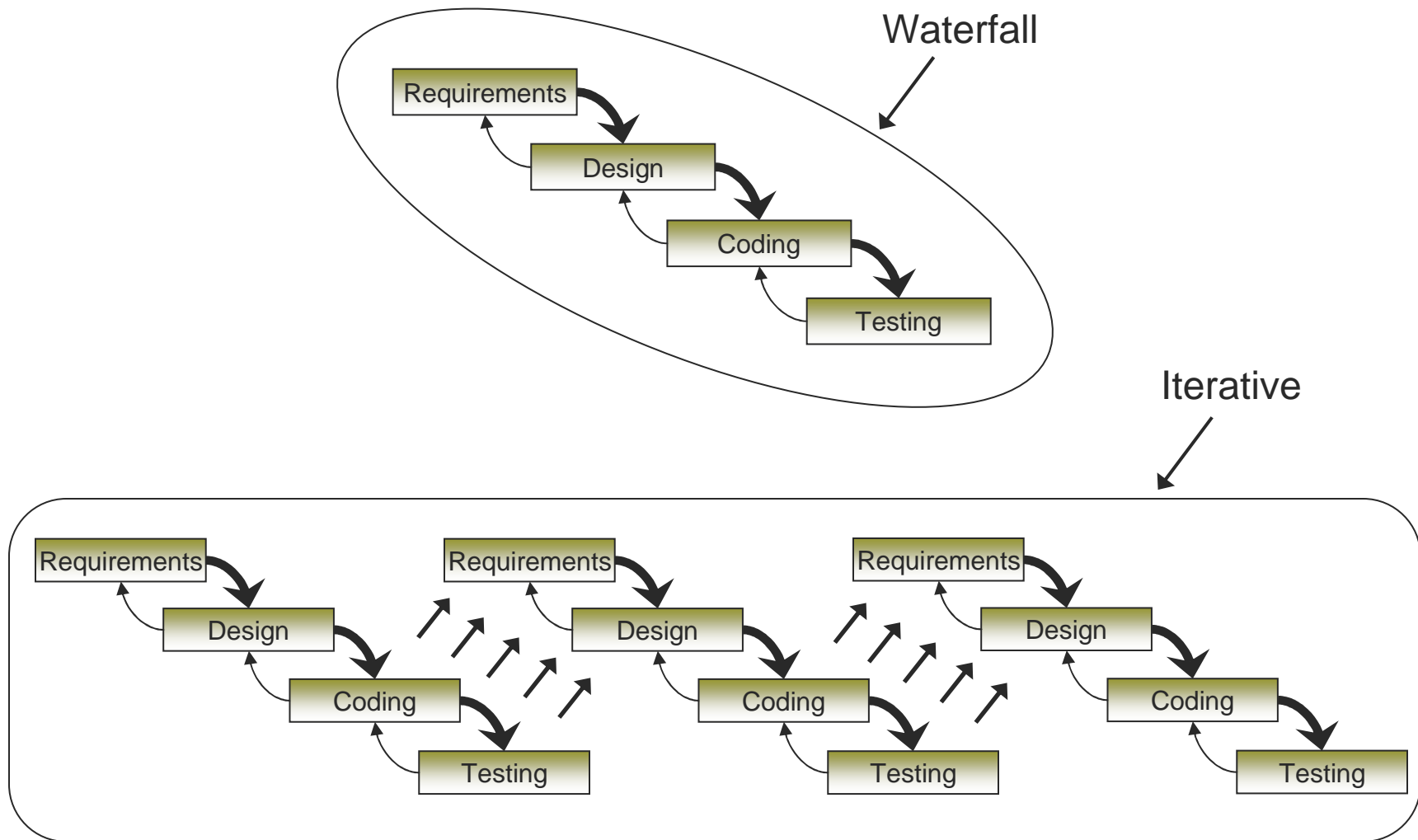
Jaco van der Merwe

Head: Software Engineering
Sun Space & Information Systems

Software Product Lifetime



Software Development Lifecycles



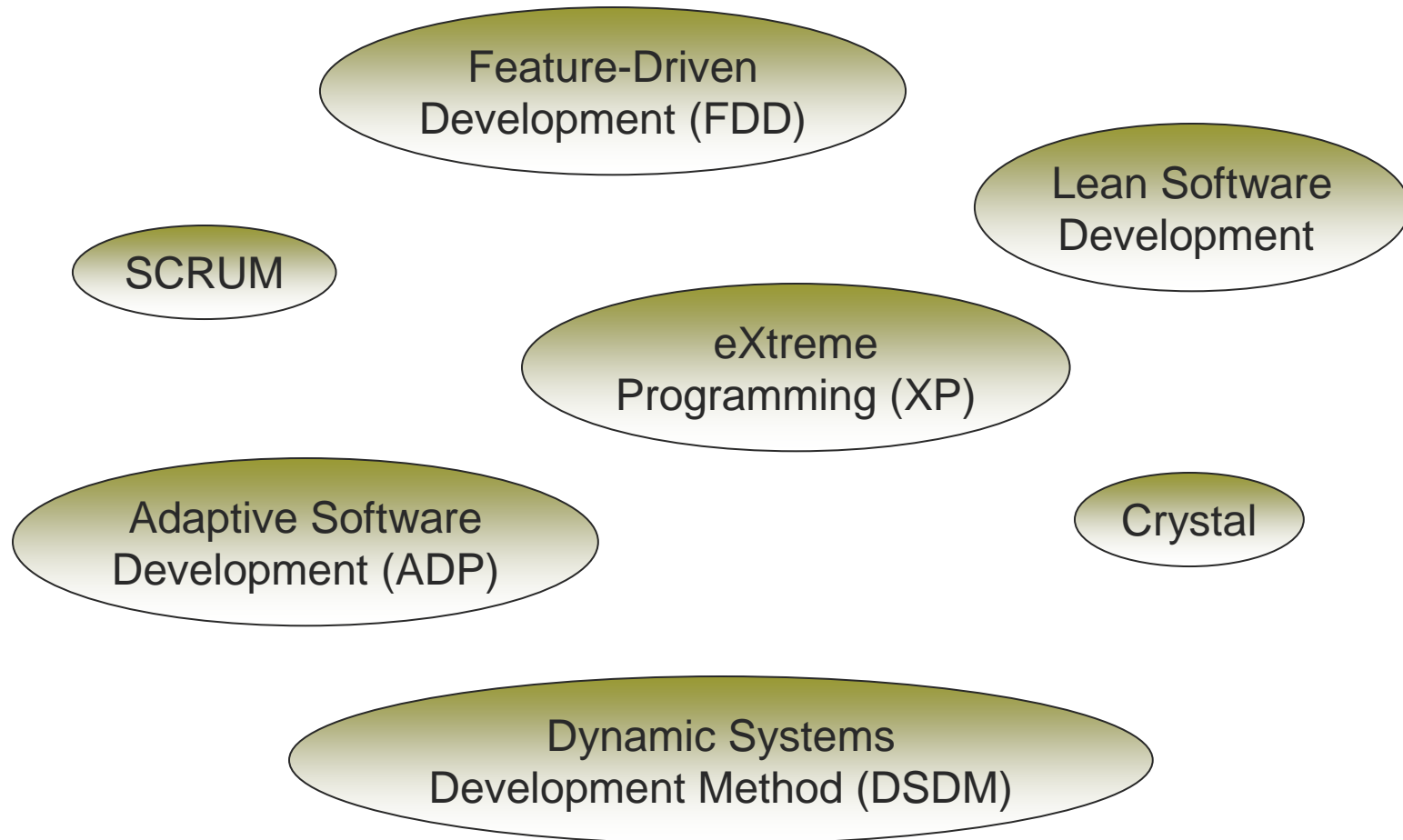
Agile or Not?

NOT!

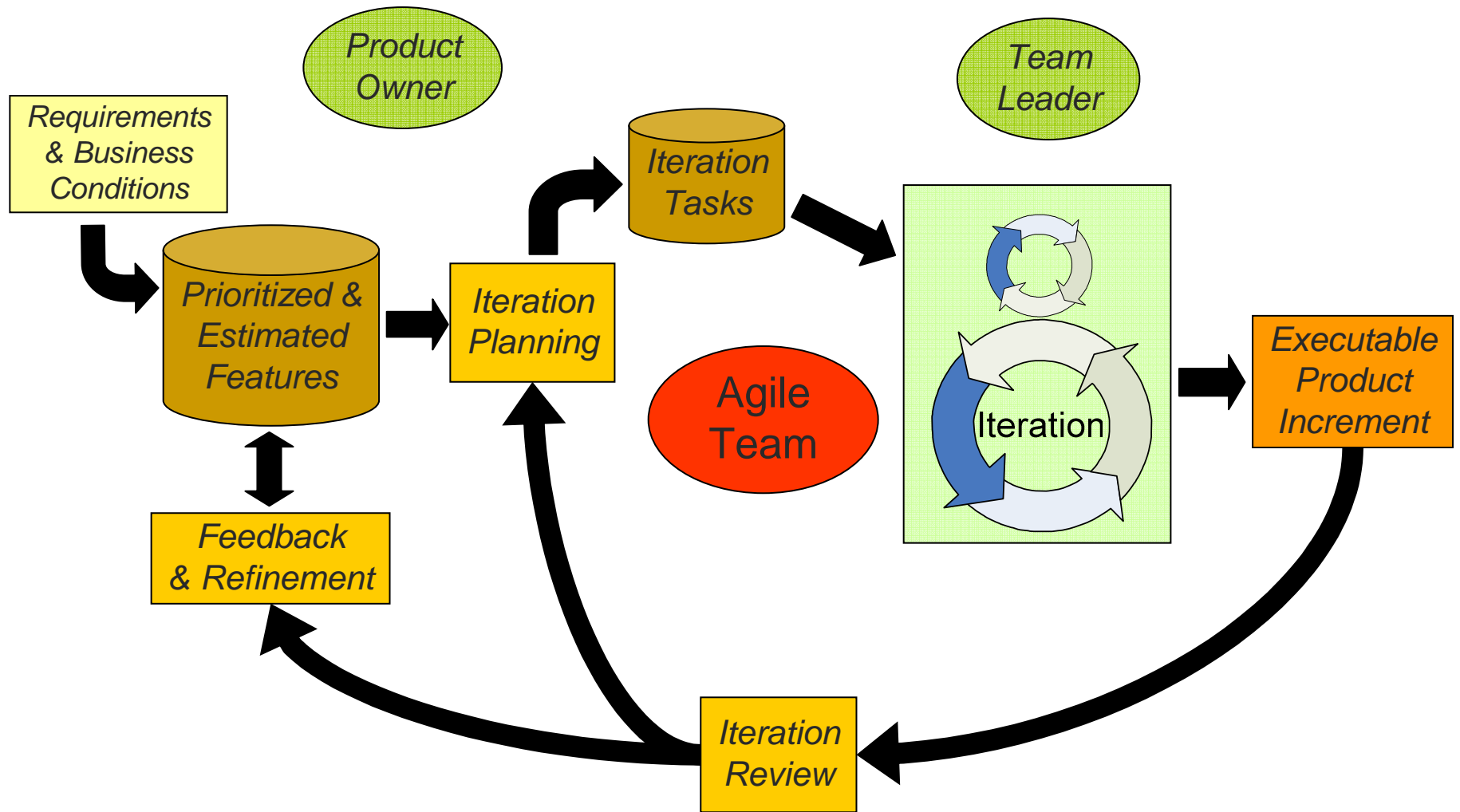
What is Agile Development?

- Ability to:
 - Develop software quickly
 - In face of changing requirements
 - ***Using lightweight processes***
- By employing:
 - ***Practices*** for discipline and feedback
 - ***Design principles*** to keep software flexible & maintainable
 - ***Design patterns*** that balance those principles for specific problems

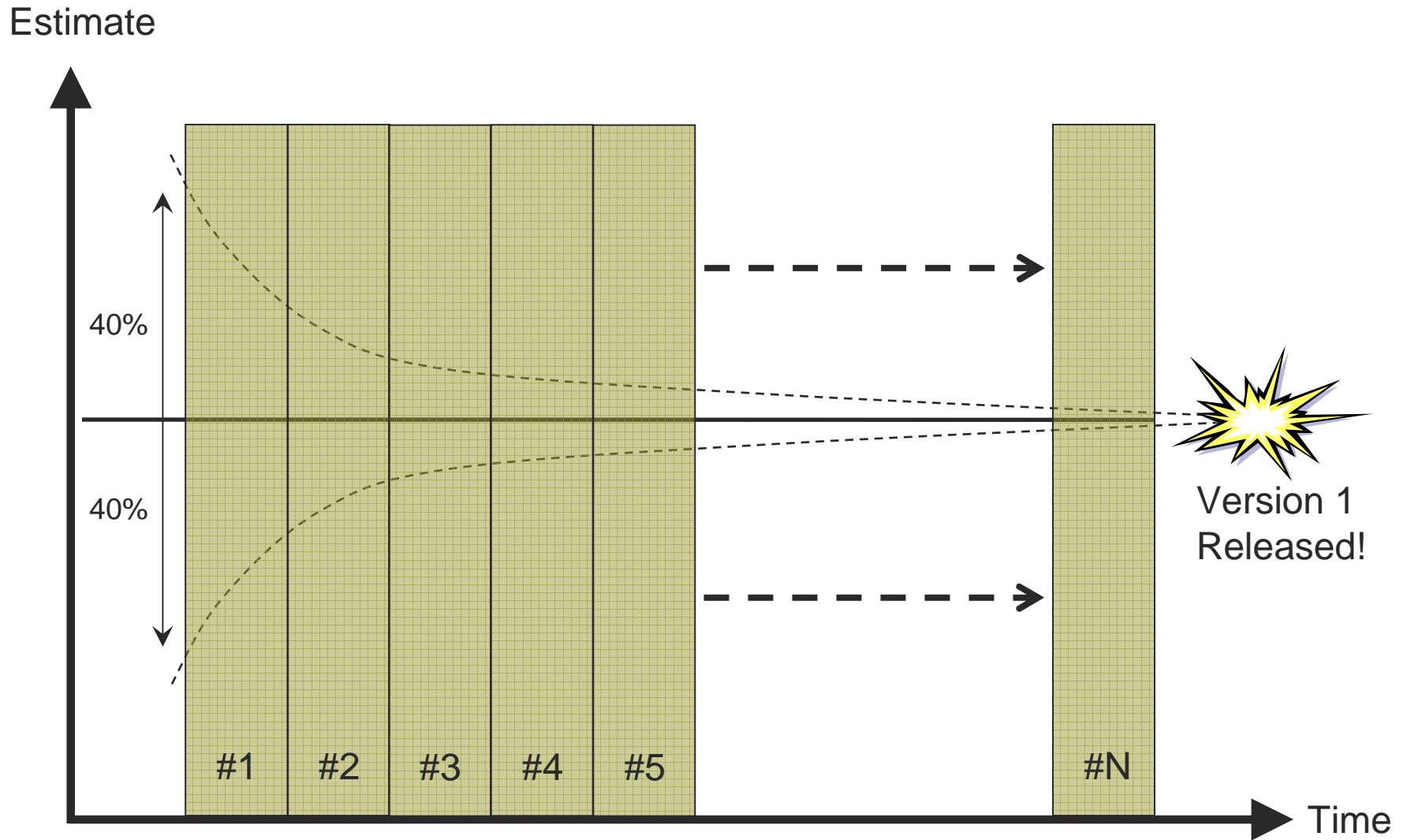
Agile Processes Menu



What Does An Agile Process Look Like?



What About Estimates & Planning?



Agile Practices

- Two categories:
 - Customer & management practices
 - Requirements analysis
 - Planning
 - Project management
 - Programming practices
 - Working with code in an agile way
- Focus is primarily on customer and management practices

Management Practices

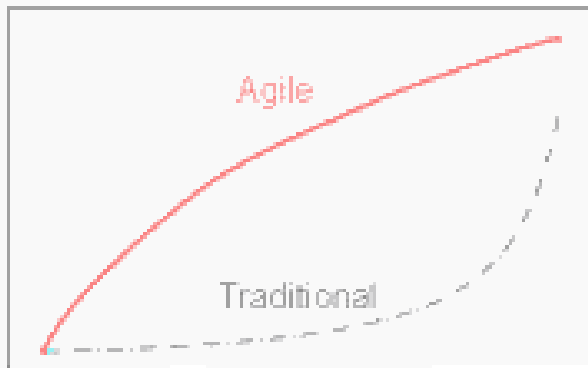
- Involve customer closely
- Iterate early and regularly
- Feature estimation & prioritization
- Release and iteration planning
- Velocity
- Chart progress

Programming Practices

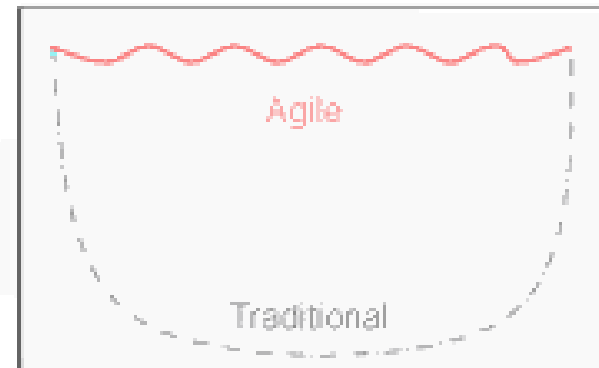
- Test-driven design
 - Design and write tests before code
- Simple and clean design
 - Each iteration ends with a design that is as good as it can be for the features in that iteration
 - No less, ***no more***
- Refactoring
 - Improve code only when design smells are present
 - When? Continuously or planned
 - Functionality, support change, readability

Agile Development Value Proposition

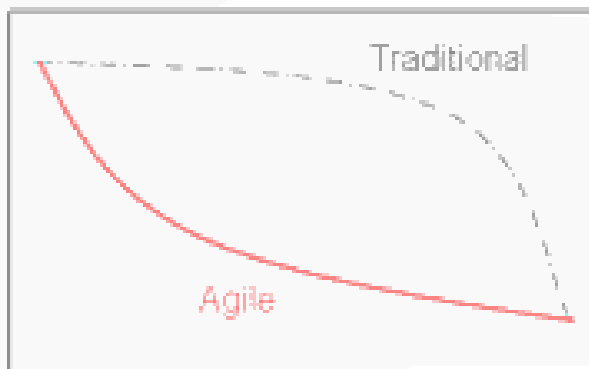
Value



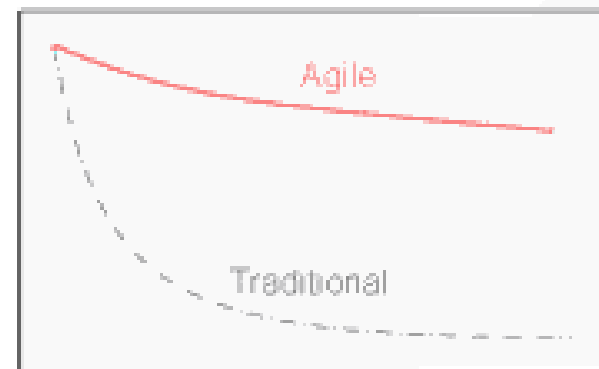
Visibility



Risk



Adaptability

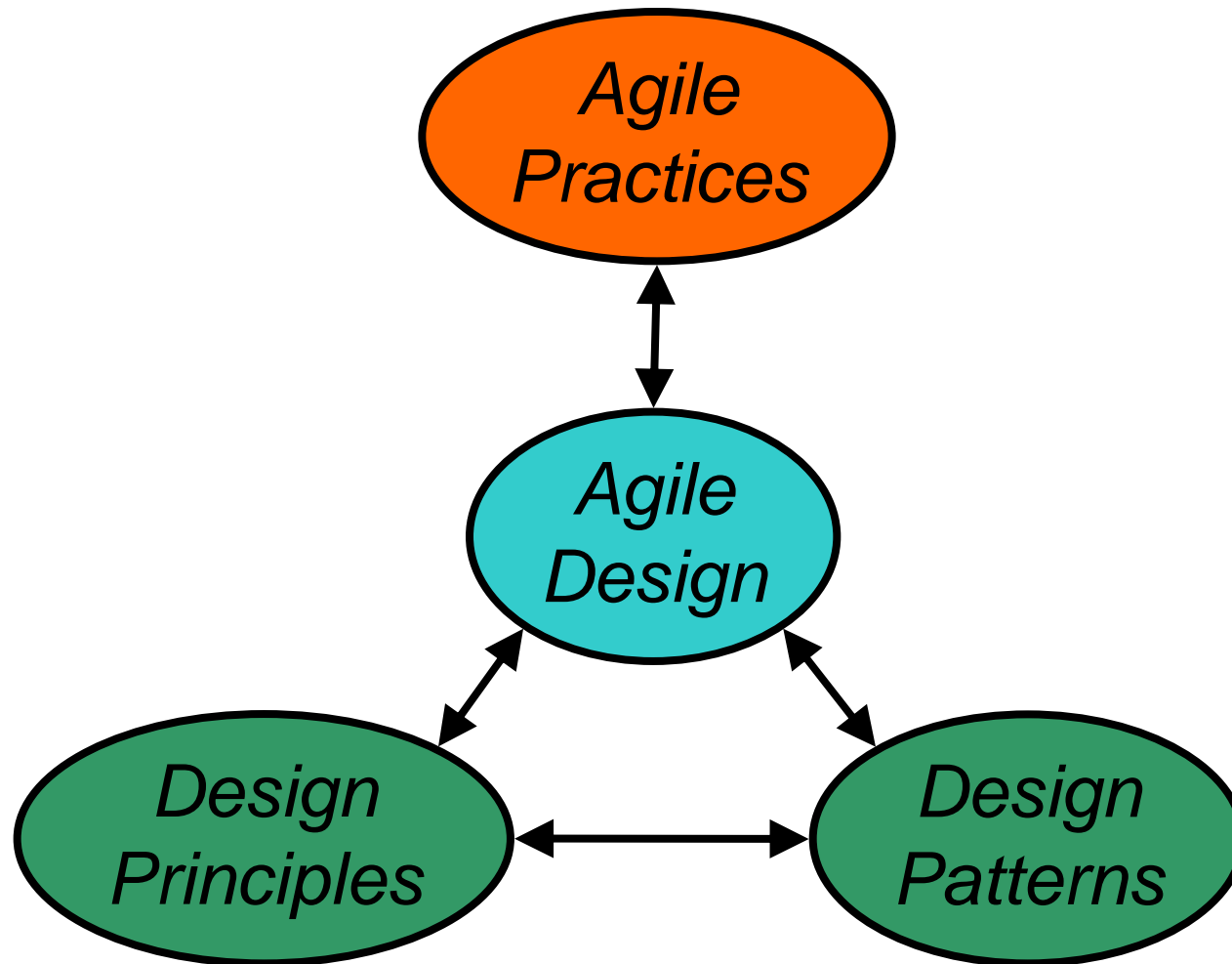


The Agile Value System

- Individuals and interactions over process and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

While there is value in the items on the right, we value the items on the left more

Agile Software Development



Questions

